SAW Filter 118.30MHz  
Part No: MP07282  

A. MAXIMUM RATINGS:  

- Electrostatic Sensitive Device  
- Operating Temperature: -30°C to 85°C  
- Storage Temperature: -40°C to 85°C  
- Input Power: 10dBm  
- DC Voltage: 5V  
- Implementation of IIP3: 28dBm min.  

B. ELECTRICAL CHARACTERISTICS:  

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center frequency Fc MHz</td>
<td>-</td>
<td>118.3</td>
<td>-</td>
</tr>
<tr>
<td>Insertion Loss at Fo MHz</td>
<td>-</td>
<td>6.9</td>
<td>8.5</td>
</tr>
<tr>
<td>-1dB Bandwidth kHz</td>
<td>-</td>
<td>128</td>
<td>-</td>
</tr>
<tr>
<td>-3dB Bandwidth kHz</td>
<td>150</td>
<td>237</td>
<td>-</td>
</tr>
<tr>
<td>Passband Ripple (Fo ± 30kHz) dB</td>
<td>-</td>
<td>0.2</td>
<td>1</td>
</tr>
<tr>
<td>Group Delay variation (Fo ± 12.5kHz) usec</td>
<td>-</td>
<td>0.2</td>
<td>1</td>
</tr>
<tr>
<td>Group Delay variation (Fo ± 75kHz) usec</td>
<td>-</td>
<td>0.5</td>
<td>4</td>
</tr>
</tbody>
</table>

Relative Attenuation dB  
- Fc ± 200kHz ~ Fc ± 400kHz  
  5 9 -  
- Fc ± 400kHz ~ Fc ± 600kHz  
  10 36 -  
- Fc ± 600kHz ~ Fc ± 1.0MHz  
  15 34 -  
- Fc ± 1.0MHz ~ Fc ± 3.0MHz  
  30 35 -  
- Fc ± 3.0MHz ~ Fc ± 15.0MHz  
  37 41 -  
- Fc ± 15.0MHz ~ Fc ± 80.0MHz  
  45 50 -  

Temperature Coefficient ppm/°C²  
-0.036  

Source Impedance (Differential) Ω  
- 200 -  

Load Impedance (Differential) Ω  
- 200 -  

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TB1202A v1
C. FREQUENCY CHARACTERISTICS:

1. Narrow Band Response:

2. Pass Band Response and Group Time Delay Response:
3. Smith Chart:

4. Wide Band Response:
D. OUTLINE DRAWING:

L: Input  
M: Balanced Input  
E: Output  
F: Balanced Output  
A, B, C, D, G, H, I, J: Ground  
Unit: mm

E. MATCHING CIRCUIT:

\[
\begin{align*}
Z_{in} &= 200 \, \Omega \\
L_1 &= 150nH + 15nH \\
L_2 &= 120nH + 15nH \\
C_1 &= 18pF \\
C_2 &= 24pF
\end{align*}
\]

F. PCB FOOTPRINT:
G. PACKING:

1. Reel Dimension (Please refer to FR-75D10 for packing quantity)

2. Tape Dimension
H. RECOMMENDED REFLOW PROFILE:

1. Preheating shall be fixed at 150 ~ 180°C for 60 ~ 90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50 ~ 80 seconds and at 260°C +0/-5°C peak (20 ~ 40 sec).
4. Time: 2 times.